FILE 'REGISTRY' ENTERED AT 15:03:05 ON 23 JUL 2004
L34 55 SEA ABB=ON PLU=ON KVAELVHFL/SQSP

FILE 'CAPLUS' ENTERED AT 15:03:47 ON 23 JUL 2004
L35 54 SEA ABB=ON PLU=ON L34
L36 15 SEA ABB=ON PLU=ON L35 AND (IMMUN?(3A)(MODULAT? OR RESPONS? OR STIMUL? OR ACTIVAT? OR ADJUVANT) OR IMMUNORES PONS? OR IMMUNOMODULAT? OR IMMUNOSTIMUL? OR IMMUNOACTIVAT ?)

L36 ANSWER 1 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 27 Jun 2004
ACCESSION NUMBER: 2004:515535 CAPLUS
DOCUMENT NUMBER: 141:70232
TITLE: Compositions comprising HLA-A1, HLA--A2, HLA--A3, HLA--A24, HLA--B7, and HLA--B44 epitopes derived from tumor-associated antigens for cancer vaccine, diagnosis, and treatment
INVENTOR(S): Keogh, Elissa A.; Southwood, Scott; Fikes, John D.; Sette, Alessandro
PATENT ASSIGNEE(S): Epimmune Inc., USA
SOURCE: PCT Int. Appl., 244 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004052917	A2	20040624	WO 2003-US38949	20031210

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2002-432017P P 20021210

AB Disclosed is a peptide or composition comprising at least one epitope or analog from CEA, HER2/neu, MAGE2, MAGE3, or p53. The epitope is a HLA-A1, HLA--A2, HLA--A3, HLA--A24, HLA--B7, or HLA--B44. The peptide or composition may comprise others including cytotoxic T lymphocyte epitope, helper T cell epitope, linker, spacer, carrier, liposome, β2-microglobulin, streptavidin, antigen-presenting cells, adjuvant, etc. The peptide or composition is useful for prophylactic, therapeutic, diagnostic or prognostic purpose.

IT **154652-79-6 711082-45-0**
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(compns. comprising HLA-A1, HLA--A2, HLA--A3, HLA--A24, HLA--B7,

and HLA--B44 epitopes derived from tumor-associated antigens for cancer vaccine, diagnosis, and treatment)

L36 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 19 Mar 2004
ACCESSION NUMBER: 2004:220431 CAPLUS
DOCUMENT NUMBER: 140:269523
TITLE: Epitopes of target-associated antigens and encoding nucleic acids for diagnosis and treatment of disease such as cancer
INVENTOR(S): Simard, John J. l.; Diamond, David C.; Liu, Liping; Liu, Zheng
PATENT ASSIGNEE(S): Mannkind Corporation, USA
SOURCE: PCT Int. Appl., 357 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004022709	A2	20040318	WO 2003-US27706	20030905
WO 2004022709	A3	20040521		

W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, AM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2002-409123P P 20020906

AB Disclosed herein are polypeptides, including epitopes, clusters, and antigens. The epitopes of the invention have high affinity for MHC class I antigen such as HLA-A2, HLA-B7 or HLA-B51 mols. The exemplified epitopes are displayed on tumor cells or neovasculature cells, and are therefore useful as anti-cancer vaccines or for generating antibodies for passive/adoptive immunotherapy of cancer. An **immune adjuvant** such as cytokine, **immunostimulatory** polynucleotide, dinucleotide and CpG-containing oligonucleotide; as well as a second epitope such as IRES, ISS, NIS or ubiquitin may also be included in the target antigen epitope-containing compns. for therapeutic use. Diagnostic kits are also claimed.

IT **673089-30-0P**
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(amino acid sequence; epitopes of target-associated antigens and encoding nucleic acids for diagnosis and treatment of disease such as cancer)

L36 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 24 Oct 2003
ACCESSION NUMBER: 2003:837109 CAPLUS
DOCUMENT NUMBER: 139:336911
TITLE: Heteroclitic analogs of MHC class I epitopes derived from tumor-associated, parasitic, viral, bacterial or fungal antigens for inducing cytotoxic T lymphocytes
INVENTOR(S): Ishioka, Glenn; Fikes, John; Tangri, Shabnam; Sette, Alessandro
PATENT ASSIGNEE(S): Epimmune Inc., USA
SOURCE: PCT Int. Appl., 244 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003087126	A2	20031023	WO 2003-US10571	20030407
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2003143672	A1	20030731	US 2002-116118	20020405

PRIORITY APPLN. INFO.:

US 2002-116118	A	20020405
US 2002-413471P	P	20020926
US 1999-166529P	P	19991118
US 2000-239008P	P	20001006
WO 2000-US31856	A2	20001120

AB Heteroclitic analogs of class I epitopes are prepared by providing conservative, semi-conservative, or non-conservative amino acid substitutions at positions 3 and/or 4 and/or 5 and/or 6 and/or 7 and/or 8 and/or 9 and/or 10 of these epitopes. The class I epitope may be from a viral antigen, a tumor-associated antigen (e.g. CEA, MAGE-1, MAGE-2, MAGE-3, MAGE-11 and MAGE-A10), a parasitic antigen, a bacterial antigen, or a fungal antigen, preferably, CEA and MAGE-2. The analogs are useful in eliciting **immune responses** with respect to the corresponding wild-type epitopes.

IT **154652-79-6**
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(heteroclitic analogs of MHC class I epitopes derived from tumor-associated, parasitic, viral, bacterial or fungal antigens for inducing cytotoxic T lymphocytes)

L36 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 01 Aug 2003
ACCESSION NUMBER: 2003:590717 CAPLUS
DOCUMENT NUMBER: 139:148459
TITLE: Heteroclitic analogs of MHC or HLA class I epitopes for enhancing immunogenicity of vaccine
INVENTOR(S): Tangri, Shabnam; Sette, Alessandro; Ishioka, Glenn; Fikes, John D.
PATENT ASSIGNEE(S): Epimmune Inc., USA
SOURCE: U.S. Pat. Appl. Publ., 52 pp., Cont.-in-part of Appl. No. PCT/US00/31856.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003143672	A1	20030731	US 2002-116118	20020405
WO 2001036452	A2	20010525	WO 2000-US31856	20001120
WO 2001036452	A3	20020110		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

WO 2003087126	A2	20031023	WO 2003-US10571	20030407

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.:

US 1999-166529P	P	19991118
US 2000-239008P	P	20001006
WO 2000-US31856	A2	20001120
US 2002-116118	A	20020405
US 2002-413471P	P	20020926

AB Heteroclitic analogs of Class I epitopes are prepared by providing conservative or semi-conservative amino acid substitutions at positions 3 and/or 5 and/or 7 of these epitopes. The class I epitope is derived from viral antigen, tumor-associated antigen, parasitic antigen, bacterial antigen, or fungal antigen. The analogs are useful in eliciting **immune responses** with respect to the corresponding wild-type epitopes. Compns.

containing the analogs may also comprise cytotoxic or helper T lymphocyte epitopes as well as liposome, lipid, heteropolymer, homopolymer, β2 microglobulin, HLA heavy chain, streptavidin, fluorescent label, radioisotope, or others.

IT **154652-79-6**
RL: PRP (Properties)
(unclaimed sequence; heteroclitic analogs of MHC or HLA class I epitopes for enhancing immunogenicity of vaccine)

L36 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 13 Jun 2003
ACCESSION NUMBER: 2003:454909 CAPLUS
DOCUMENT NUMBER: 139:51594
TITLE: Breast cancer-associated antigens, polynucleotides and antibodies for cancer diagnosis and therapy
INVENTOR(S): Scanlan, Matthew J.; Gout, Ivan; Stockert, Elisabeth; Old, Lloyd J.; Gure, Ali; Chen, Yao-Tseng
PATENT ASSIGNEE(S): Ludwig Institute for Cancer Research, USA
SOURCE: U.S. Pat. Appl. Publ., 173 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003108888	A1	20030612	US 2002-146473	20020515
PRIORITY APPLN. INFO.:			US 2001-291150P P	20010515

AB The invention provides methods for diagnosing cancer including breast cancer, based on the identification of certain breast cancer-associated polypeptides as antigens that elicit **immune responses** in breast cancer. The identified antigens can be utilized as markers for diagnosing breast cancer, and for following the course of treatment of breast cancer.

IT **543750-32-9P**
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(amino acid sequence; breast cancer-associated antigens, polynucleotides and antibodies for cancer diagnosis and therapy)

L36 ANSWER 6 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 16 May 2003
ACCESSION NUMBER: 2003:376883 CAPLUS
DOCUMENT NUMBER: 138:400392
TITLE: Peptides binding HLA class I and II antigens
INVENTOR(S): Sette, Alessandro; Sidney, John; Southwood, Scott
PATENT ASSIGNEE(S): Epimmune Inc., USA
SOURCE: PCT Int. Appl., 382 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent

LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003040165	A2	20030515	WO 2001-US51650	20011018
WO 2003040165	A3	20040624		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2000-242350P P 20001019
US 2001-285624P P 20010420

AB The authors disclose the identification and selection of immunogenic peptides capable of specifically binding HLA antigens and inducing T cell activation. The peptides are useful to elicit an **immune response** against a desired antigen.

IT **467216-89-3**
RL: BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(amino acid sequence; identification and selection of immunogenic peptides with HLA binding motifs)

L36 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 18 Oct 2002
ACCESSION NUMBER: 2002:793764 CAPLUS
DOCUMENT NUMBER: 137:309478
TITLE: anticancer vaccines comprising epitopes of tumor or neovasculature antigen
INVENTOR(S): Simard, John J. L.; Diamond, David C.; Liu, Liping; Xie, Zhidong
PATENT ASSIGNEE(S): CTL Immunotherapies Corp., USA; Mannkind Corporation
SOURCE: PCT Int. Appl., 352 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 7
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002081646	A2	20021017	WO 2002-US11101	20020404
WO 2002081646	A3	20030717		

W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG,

MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1383528 A2 20040128 EP 2002-723804 20020404
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

PRIORITY APPLN. INFO.: US 2001-282211P P 20010406
US 2001-337017P P 20011107
US 2002-363210P P 20020307
WO 2002-US11101 W 20020404

AB Disclosed herein are polypeptides, including epitopes, clusters, and antigens. Also disclosed are compns. that include said polypeptides and methods for their use for cancer diagnosis and therapy.

IT **471945-66-1**
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(amino acid sequence; anticancer vaccines comprising epitopes of tumor or neovasculature antigen)

L36 ANSWER 8 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 30 Nov 2001
ACCESSION NUMBER: 2001:868535 CAPLUS
DOCUMENT NUMBER: 136:49291
TITLE: Design and construction of synthetic scrambled vaccines or Savines for immunopotentiation
INVENTOR(S): Thomson, Scott Anthony; Ramshaw, Ian Alistair
PATENT ASSIGNEE(S): The Australian National University, Australia
SOURCE: PCT Int. Appl., 364 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001090197	A1	20011129	WO 2001-AU622	20010525
WO 2001090197	C2	20030912		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

EP 1285004 A1 20030226 EP 2001-933479 20010525
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,

PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

JP 2004506410	T2	20040304	JP 2001-587008		20010525
US 2004054137	A1	20040318	US 2003-296734		20030804
PRIORITY APPLN. INFO.:			AU 2000-7761	A	20000526
			WO 2001-AU622	W	20010525

AB A novel vaccine/therapeutic strategy to enhance the efficacy of immunopotentiating compns. is provided such that pathogen or cancer protein sequences are systematically fragmented, reverse translated back into DNA, rearranged randomly, and then joined back together. The designed synthetic DNA sequence is then constructed using long oligonucleotides and can be transferred into a range of delivery vectors. Design or construction of the synthetic polypeptide or polynucleotides sequence is facilitated with the assistance of a computer programmed with software which inter alia fragment a parent sequence into fragments, and which links those fragments together in a different relationship. The vaccine vectors used here were DNA vaccine plasmids and recombinant poxvirus vectors which have been previously shown to elicit strong T cell responses. The structure of the parent polypeptide(s) are disrupted sufficiently to impede, abrogate, or otherwise alter at lease one function, while simultaneously minimizing the destruction of potentially useful epitopes that are present in the parent polypeptide(s). An important advantage of scrambled antigen vaccines or "Savines" is that the amount of starting sequence information for the design can be easily expanded to include the majority of the protein sequences from a pathogen or for cancer, thereby providing the maximum possible vaccine or therapy coverage for a given population. Thus, Savines are constructed for HIV virus, melanoma, and hepatitis C. For melanoma, two Savine constructs are constructed: one to cater to antigens associated with melanoma and another for differentiation antigens from melanocytes which are often upregulated in melanoma.

IT **377114-80-2P**
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(amino acid sequence; design and construction of synthetic scrambled vaccines or Savines for immunopotentiation)

IT **153727-13-0 378747-30-9**
RL: PRP (Properties)
(unclaimed protein sequence; design and construction of synthetic scrambled vaccines or Savines for immunopotentiation)

REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 27 Jul 2001
ACCESSION NUMBER: 2001:545981 CAPLUS
DOCUMENT NUMBER: 135:136413
TITLE: MAGE antigenic peptides which bind HLA-B35 and HLA-B44
INVENTOR(S): Luiten, Rosalie; Boon-Falleur, Thierry; Van Der Bruggen, Pierre; Stroobant, Vincent; Demotte, Nathalie; Schultz, Erwin
PATENT ASSIGNEE(S): Ludwig Institute for Cancer Research, USA
SOURCE: PCT Int. Appl., 103 pp.

CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001053833	A1	20010726	WO 2001-US2008	20010119
W: AU, CA, CN, JP, KR				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
US 2002164654	A1	20021107	US 2001-766889	20010119
EP 1266221	A1	20021218	EP 2001-913365	20010119
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				

PRIORITY APPLN. INFO.: US 2000-177242P P 20000120
US 2000-243212P P 20001025
WO 2001-US2008 W 20010119

AB The invention provides antigenic peptides derived from MAGE-A1 polypeptides and presented by HLA-B35 and HLA-B44 mols. Antigenic peptides derived from MAGE-A3 polypeptides and presented by HLA-B35 mols. also are provided. Methods for diagnosis and treatment which involve the polypeptides also are provided.

IT **153727-13-0**
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(amino acid sequence; MAGE antigenic peptides which bind HLA-B35 and HLA-B44 for diagnosis and treatment of cancer)

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 15 Jun 2001
ACCESSION NUMBER: 2001:435093 CAPLUS
DOCUMENT NUMBER: 135:45180
TITLE: Inducing cellular **immune responses** to MAGE2/3 using peptide and nucleic acid compositions
INVENTOR(S): Fikes, John; Sette, Alessandro; Sidney, John; Southwood, Scott; Chesnut, Robert; Celis, Esteban; Keogh, Elissa
PATENT ASSIGNEE(S): Epimmune Inc., USA
SOURCE: PCT Int. Appl., 171 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001042267	A1	20010614	WO 2000-US33545	20001211
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH,				

GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

EP 1235841 A1 20020904 EP 2000-984183 20001211
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
JP 2003517310 T2 20030527 JP 2001-543564 20001211
US 2004053822 A1 20040318 US 2002-149135 20021021
PRIORITY APPLN. INFO.: US 1999-458298 A 19991210
WO 2000-US33545 W 20001211

AB The invention uses our knowledge of the mechanisms by which antigen is recognized by T cells to identify and prepare MAGE2/3 epitopes, and to develop epitope-based vaccines directed towards MAGE2/3-bearing tumors. More specifically, this application communicates our discovery of pharmaceutical compns. and methods of use in the prevention and treatment of cancer.

IT **154652-79-6 160213-40-1**
RL: BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(vaccines containing MAGE2/3 epitopes for Inducing cellular **immune responses** and for cancer therapy)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 15 Jun 2001
ACCESSION NUMBER: 2001:434842 CAPLUS
DOCUMENT NUMBER: 135:45176
TITLE: HLA class I A2 tumor associated antigen peptides and vaccine compositions
INVENTOR(S): Fikes, John; Sette, Alessandro; Sidney, John; Southwood, Scott; Celis, Esteban; Keogh, Elissa; Chesnut, Robert
PATENT ASSIGNEE(S): Epimmune Inc., USA
SOURCE: PCT Int. Appl., 86 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001041741	A1	20010614	WO 2000-US34318	20001213

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ,

UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

US 6602510	B1	20030805	US 2000-543608	20000405
AU 2001022737	A5	20010618	AU 2001-22737	20001213
EP 1242049	A1	20020925	EP 2000-986510	20001213
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2003516344	T2	20030513	JP 2001-542909	20001213
US 2003224036	A1	20031204	US 2002-149915	20021015

PRIORITY APPLN. INFO.:
US 1999-170448P P 19991213
US 2000-543608 A 20000405
US 2000-583200 A 20000530
WO 2000-US34318 W 20001213

AB A plurality of peptide epitopes can be used to monitor an **immune response** to a tumor-associated antigen or, when two or more peptides are combined, can be used to create a cancer vaccine that stimulates the cellular arm of the immune system. In particular, the vaccines mediate **immune responses** against tumors in persons who have HLA-A2 mols. The peptide epitopes stimulate helper T-cell and cytotoxic T-cell responses. Altered peptides, peptide analogs, have enhanced biol. activities. The epitopes are from CEA, HER2/neu, MAGE2, MAGE3, or p53.

IT **154652-79-6**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(tumor-associated antigen peptides and vaccine compns. for therapy in humans with HLA-A2 mols.)

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 12 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 27 May 2001
ACCESSION NUMBER: 2001:380614 CAPLUS
DOCUMENT NUMBER: 135:4462
TITLE: Modification of MHC class I motif of peptide epitopes for enhanced cytotoxic T-cell response
INVENTOR(S): Tangri, Shabnam; Sette, Alessandro; Ishioka, Glenn
PATENT ASSIGNEE(S): Epimmune Inc., USA
SOURCE: PCT Int. Appl., 96 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001036452	A2	20010525	WO 2000-US31856	20001120

WO 2001036452 A3 20020110
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
EP 1230268 A2 20020814 EP 2000-979208 20001120
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
JP 2003521243 T2 20030715 JP 2001-538941 20001120
US 2003143672 A1 20030731 US 2002-116118 20020405
PRIORITY APPLN. INFO.: US 1999-166529P P 19991118
US 2000-239008P P 20001006
WO 2000-US31856 W 20001120

AB The authors disclose heteroclitic analogs of HLA class I epitopes that are prepared by providing conservative or semi-conservative amino acid substitutions at positions 3 and/or 5 and/or 7 of these epitopes. These analogs elicit an enhanced class I-restricted T-cell response to tumor and viral antigens.

IT **154652-79-6**
RL: PRP (Properties)
(unclaimed sequence; modification of MHC class I motif of peptide epitopes for enhanced cytotoxic T-cell response)

L36 ANSWER 13 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 18 Aug 1999
ACCESSION NUMBER: 1999:511245 CAPLUS
DOCUMENT NUMBER: 131:140508
TITLE: Tumor-associated antigen derivatives of MAGE proteins and their use in cancer vaccine therapy
INVENTOR(S): Cabezon, Silva Teresa; Cohen, Joseph; Slaoui, Moncef Mohamed; Vinals Bassols, Carlota
PATENT ASSIGNEE(S): Smithkline Beecham Biologicals SA, Belg.
SOURCE: PCT Int. Appl., 74 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9940188	A2	19990812	WO 1999-EP660	19990202
WO 9940188	A3	19991014		

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,

CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

CA 2319309	AA	19990812	CA 1999-2319309		19990202
AU 9927220	A1	19990823	AU 1999-27220		19990202
AU 737337	B2	20010816			
BR 9907691	A	20001114	BR 1999-7691		19990202
TR 200002284	T2	20001121	TR 2000-200002284		19990202
EP 1053325	A2	20001122	EP 1999-907476		19990202
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI					
JP 2002502604	T2	20020129	JP 2000-530602		19990202
NZ 506086	A	20030131	NZ 1999-506086		19990202
ZA 9900872	A	20000804	ZA 1999-872		19990204
NO 2000003958	A	20001004	NO 2000-3958		20000804
PRIORITY APPLN. INFO.:			GB 1998-2543	A	19980205
			GB 1998-2650	A	19980206
			WO 1999-EP660	W	19990202

AB The present invention relates to derivs. of MAGE proteins and their use in cancer vaccine therapy. In particular, the protein derivs. are: (1) fusion proteins comprising an antigen encoded by the MAGE family of genes, linked to an immunol. fusion partner which provides T helper epitopes; (2) chemical modified MAGE proteins wherein the antigen's disulfide bridges are reduced and the the resulting thiols blocked; and/or (3) genetically modified MAGE proteins provided with an affinity tag and/or genetically modified to prevent disulfphide bridge formation. The preferred MAGE proteins are MAGE A1 and MAGE A3. The fusion proteins of the invention comprise an immunol. fusion parter such as lipoprotein D from Haemophilus influenzae, the NS1 (hemagglutinin) non-structural protein from influenzae virus, and/or the Streptococcus pneumoniae protein LYTA. In addition, novel methods are also described for purifying MAGE proteins and for formulating vaccines for treating a range of cancers. The fusion protein LPD-MAGE3-His was used, along with an adjuvant, in a vaccine for the treatment of melanoma, and a TH1 type **immune response** was raised against said composition The novel MAGE protein purification process of the invention comprises reducing the disulfide bonds, blocking the resulting free thiol group with a blocking group, and subjecting the resulting derivative to one or more chromatog. purification steps.

IT **235430-29-2P 235430-33-8P**
RL: BPN (Biosynthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(amino acid sequence; tumor-associated antigen derivs. of MAGE proteins and their use in cancer vaccine therapy)

L36 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 11 Mar 1999
ACCESSION NUMBER: 1999:159087 CAPLUS
DOCUMENT NUMBER: 130:336617
TITLE: Identification of MAGE-3 epitopes presented by HLA-DR molecules to CD4+ T lymphocytes
AUTHOR(S): Chaux, Pascal; Vantomme, Valerie; Stroobant, Vincent; Thielemans, Kris; Corthals, Jurgen; Luiten, Rosalie; Eggermont, Alexander M. M.; Boon, Thierry; Van der Bruggen, Pierre
CORPORATE SOURCE: Ludwig Institute for Cancer Research, Universite Catholique de Louvain 74.59, Brussels, B-1200,

Belg.
SOURCE: Journal of Experimental Medicine (1999), 189(5), 767-777
CODEN: JEMEAV; ISSN: 0022-1007
PUBLISHER: Rockefeller University Press
DOCUMENT TYPE: Journal
LANGUAGE: English

AB MAGE-type genes are expressed by many tumors of different histol. types and not by normal cells, except for male germline cells, which do not express major histocompatibility complex (MHC) mols. Therefore, the antigens encoded by MAGE-type genes are strictly tumor specific and common to many tumors. The authors describe here the identification of the first MAGE-encoded epitopes presented by histocompatibility leukocyte antigen (HLA) class II mols. to CD4+ T lymphocytes. Monocyte-derived dendritic cells were loaded with a MAGE-3 recombinant protein and used to stimulate autologous CD4+ T cells. The authors isolated CD4+ T cell clones that recognized 2 different MAGE-3 epitopes, MAGE-3114-127 and MAGE-3121-134, both presented by the HLA-DR13 mol., which is expressed in 20% of Caucasians. The second epitope is also encoded by MAGE-1, -2, and -6. The authors' procedure should be applicable to other proteins for the identification of new tumor-specific antigens presented by HLA class II mols. The knowledge of such antigens will be useful for evaluation of the **immune response** of cancer patients **immunized** with proteins or with recombinant viruses carrying entire genes coding for tumor antigens. The use of antigenic peptides presented by class II in addition to peptides presented by class I may also improve the efficacy of therapeutic antitumor vaccination.

IT **221306-20-3**
RL: PRP (Properties)
(identification of MAGE-3 epitopes presented by HLA-DR mols. to CD4-pos. human T lymphocytes)

REFERENCE COUNT: 52 THERE ARE 52 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
ED Entered STN: 14 Jan 1995
ACCESSION NUMBER: 1995:294003 CAPLUS
DOCUMENT NUMBER: 122:263516
TITLE: HLA-A2.1 binding peptides and their detection and uses
INVENTOR(S): Grey, Howard M.; Sette, Alessandro; Sidney, John; Kast, W. Martin
PATENT ASSIGNEE(S): Cytel Corp., USA
SOURCE: PCT Int. Appl., 138 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 17
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9420127	A1	19940915	WO 1994-US2353	19940304

WO 9420127 C2 20030417
W: AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, LV, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, UA, UZ, VN
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

CA 2157510	AA	19940915	CA 1994-2157510	19940304
AU 9463594	A1	19940926	AU 1994-63594	19940304
CN 1118572	A	19960313	CN 1994-191364	19940304
EP 703783	A1	19960403	EP 1994-910837	19940304
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
JP 08507525	T2	19960813	JP 1994-520190	19940304
BR 9406652	A	19960910	BR 1994-6652	19940304
AU 9865979	A1	19980702	AU 1998-65979	19980518
US 2003185822	A1	20031002	US 2002-116557	20020403
US 2002160960	A1	20021031	US 2002-121415	20020411

PRIORITY APPLN. INFO.:

US 1993-27146	A	19930305
US 1993-73205	A	19930604
US 1993-159184	A	19931129
US 1994-205713	A2	19940304
WO 1994-US2353	W	19940304
US 1994-349177	A1	19941202
US 1998-98584	B2	19980617
US 1998-189702	A1	19981110

AB An algorithm for selecting immunogenic oligopeptides capable of specifically binding glycoproteins encoded by HLA-A2.1 allele and inducing T cell activation in T cells restricted by the A2.1 allele. The peptides are useful to elicit an **immune response** against a target antigen. Identification of immunogenic oligopeptides from viral or tumor-related proteins was demonstrated.

IT **154652-79-6 160213-40-1**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(HLA-A2.1-binding immunogenic peptide and algorithm for its identification)

E253 THROUGH E265 ASSIGNED

FILE 'REGISTRY' ENTERED AT 15:07:57 ON 23 JUL 2004
L37 13 SEA FILE=REGISTRY ABB=ON PLU=ON (154652-79-6/BI OR 153727-13-0/BI OR 160213-40-1/BI OR 221306-20-3/BI OR 235430-29-2/BI OR 235430-33-8/BI OR 377114-80-2/BI OR 378747-30-9/BI OR 467216-89-3/BI OR 471945-66-1/BI OR 543750-32-9/BI OR 673089-30-0/BI OR 711082-45-0/BI)

L38 13 L34 AND L37

L38 ANSWER 1 OF 13 REGISTRY COPYRIGHT 2004 ACS on STN
RN **711082-45-0** REGISTRY
CN INDEX NAME NOT YET ASSIGNED
CI MAN
SQL 166

```
SEQ      1 MPLEQRSQHC KPEEGLEARG EALGLVGAQA PATEEQEAAS SSSTLVEVTL
        51 GEVPAAESPD PPQSPQGASS LPTTMNYPLW SQSYEDSSNQ EEEGPSTFPD
       101 LESEFQAALS RKVAELVHFL LLKYRAREPV TKAEMLGSVV GNWQYFFPVI
                    =========
       151 FSKASSSLQL VFGIEL
HITS AT:   112-120

REFERENCE   1:  141:70232

L38  ANSWER 2 OF 13  REGISTRY  COPYRIGHT 2004 ACS on STN
RN   673089-30-0  REGISTRY
CN   Antigen MAGE-3 (melanoma-associated antigen 3) (human) (9CI)  (CA
     INDEX NAME)
OTHER NAMES:
CN   63: PN: WO2004022709 SEQID: 73 claimed sequence
CI   MAN
SQL  314

SEQ      1 MPLEQRSQHC KPEEGLEARG EALGLVGAQA PATEEQEAAS SSSTLVEVTL
        51 GEVPAAESPD PPQSPQGASS LPTTMNYPLW SQSYEDSSNQ EEEGPSTFPD
       101 LESEFQAALS RKVAELVHFL LLKYRAREPV TKAEMLGSVV GNWQYFFPVI
                    =========
       151 FSKASSSLQL VFGIELMEVD PIGHLYIFAT CLGLSYDGLL GDNQIMPKAG
       201 LLIIVLAIIA REGDCAPEEK IWEELSVLEV FEGREDSILG DPKKLLTQHF
       251 VQENYLEYRQ VPGSDPACYE FLWGPRALVE TSYVKVLHHM VKISGGPHIS
       301 YPPLHEWVLR EGEE
HITS AT:   112-120

**RELATED SEQUENCES AVAILABLE WITH SEQLINK**

REFERENCE   1:  140:269523

L38  ANSWER 3 OF 13  REGISTRY  COPYRIGHT 2004 ACS on STN
RN   543750-32-9  REGISTRY
CN   Breast cancer-associated antigen NY-BR-76 (human fragment) (9CI)
     (CA INDEX NAME)
OTHER NAMES:
CN   53: PN: US20030108888 SEQID: 53 claimed protein
CI   MAN
SQL  314

SEQ      1 MPLEQRSQHC KPEEGLEARG EALGLVGAQA PATEEQEAAS SSSTLVEVTL
        51 GEVPAAESPD PPQSPQGASS LPTTMNYPLW SQSYEDSSNQ EEEGPSTFPD
       101 LESEFQAALS RKVAELVHFL LLKYRAREPV TKAEMLGSVV GNWQYFFPVI
                    =========
       151 FSKASSSLQL VFGIELMEVD PIGHLYIFAT CLGLSYDGLL GDNQIMPKAG
       201 LLIIVLAIIA REGDCAPEEK IWEELSVLEV FEGREDSILG DPKKLLTQHF
       251 VQENYLEYRQ VPGSDPACYE FLWGPRALVE TSYVKVLHHM VKISGGPHIS
       301 YPPLHEWVLR EGEE
HITS AT:   112-120

**RELATED SEQUENCES AVAILABLE WITH SEQLINK**

REFERENCE   1:  139:51594

L38  ANSWER 4 OF 13  REGISTRY  COPYRIGHT 2004 ACS on STN
```

RN **471945-66-1** REGISTRY
CN Melanoma-associated antigen MAGE-3 (human gene MAGE-3) (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 12: PN: WO02081646 SEQID: 73 claimed protein
CI MAN
SQL 314

SEQ 1 MPLEQRSQHC KPEEGLEARG EALGLVGAQA PATEEQEAAS SSSTLVEVTL
51 GEVPAAESPD PPQSPQGASS LPTTMNYPLW SQSYEDSSNQ EEEGPSTFPD
101 LESEFQAALS RKVAELVHFL LLKYRAREPV TKAEMLGSVV GNWQYFFPVI
========
151 FSKASSSLQL VFGIELMEVD PIGHLYIFAT CLGLSYDGLL GDNQIMPKAG
201 LLIIVLAIIA REGDCAPEEK IWEELSVLEV FEGREDSILG DPKKLLTQHF
251 VQENYLEYRQ VPGSDPACYE FLWGPRALVE TSYVKVLHHM VKISGGPHIS
301 YPPLHEWVLR EGEE
HITS AT: 112-120

RELATED SEQUENCES AVAILABLE WITH SEQLINK

REFERENCE 1: 137:309478

L38 ANSWER 5 OF 13 REGISTRY COPYRIGHT 2004 ACS on STN
RN **467216-89-3** REGISTRY
CN L-Leucine, L-glutaminyl-L-alanyl-L-alanyl-L-leucyl-L-seryl-L-arginyl-L-lysyl-L-valyl-L-alanyl-L-α-glutamyl-L-leucyl-L-valyl-L-histidyl-L-phenylalanyl- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 5317: PN: WO03040165 TABLE: 29a claimed protein
CN 865: PN: WO02078524 SEQID: 1100 unclaimed
SQL 15

SEQ 1 QAALSRKVAE LVHFL
==== =====
HITS AT: 7-15

REFERENCE 1: 138:400392

REFERENCE 2: 137:274808

L38 ANSWER 6 OF 13 REGISTRY COPYRIGHT 2004 ACS on STN
RN **378747-30-9** REGISTRY
CN L-Alanine, L-α-glutamyl-L-phenylalanyl-L-glutaminyl-L-alanyl-L-alanyl-L-leucyl-L-seryl-L-arginyl-L-lysyl-L-valyl-L-alanyl-L-α-glutamyl-L-leucyl-L-valyl-L-histidyl-L-phenylalanyl-L-leucyl-L-leucyl-L-leucyl-L-lysyl-L-tyrosyl-L-arginyl-L-alanyl-L-arginyl-L-α-glutamyl-L-prolyl-L-valyl-L-threonyl-L-lysyl- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 464: PN: WO0190197 SEQID: 1296 unclaimed protein
SQL 30

SEQ 1 EFQAALSRKV AELVHFLLLK YRAREPVTKA
== =======
HITS AT: 9-17

REFERENCE 1: 136:49291

L38 ANSWER 7 OF 13 REGISTRY COPYRIGHT 2004 ACS on STN
RN **377114-80-2** REGISTRY
CN Melanoma-associated antigen Savine (synthetic) (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 544: PN: WO0190197 SEQID: 1454 claimed protein
CI MAN
SQL 3541

SEQ
1 APEEEIWEEL SVMEVYDGRE HSAYGEPRKL EEVPTAGSTD PPQSPQGASA
51 FPTTINFTRQ TVWSGNRASL YSFPEPEAAQ PMTKKRKVDG QIMPKAGLLI
101 IVLAIIAREG DCAPEEKIWE LQVLDLRKNS HQDFWTVWSG NRASLYSFPE
151 LDVLLAQEVR PRRWKLQVLD LRKNSHQDFW QGAMLAAQER RVPRAAEVPG
201 AQGQQGPRGR QSPSVSQLSV LSLSGVMLTD VSPEPLQALL LTQDLVQEKY
251 LEYRQVPDSD PARYEFLWGP RQPSEGSSSR EEEGPSTSCI LESLFRAVIT
301 AAMAARAVFL ALSAQLLQAR LMKEESPVVS TFYDPEPILC PCFMPNAAIE
351 LMEVDPIGHL YIFATCLGLS YDGLLGDNRR YVEPPEMIGP MRPEQFSDEV
401 EPATPEEGEA GGFFPWLKVY YYRFVIGLRV WQWEVISCAA MERRRLWGSI
451 QSRYISMSVW TSPRRLVEAA LMETHLSSKR YTEEAGGFFP WLKVYYYRAA
501 MSLEQRSLHC KPEEALEAQQ EALGLVCVQA ATSSSSPLVL GTLEEVPTAG
551 STDPPQSPAL ELLPRELFPP LFMAAFDGRH SQTLKAMVEL SVLEVFEGRE
601 DSILGDPKKL LTQHFVQEES LQLVFGIDVK EADPTGHSYV LVTCLGLSPD
651 PPQSPQGASS LPTTMNYPLW SQSYEDSSAA MQAEGQGTGG STGDADGPGG
701 PGIPDGPGQC FLPVFLAQPP SGQRRAATWG EGLPSQPIIH TCVYFFLPDH
751 LSFGRPFSTS CILESLFRAV ITKKVADLVG FLLLKYRAAM QAEGRGTGGS
801 TGDADGPGGP GIPDGPGDGP DGQEMDPPNP EEVKTPEEEM RSHYVAQISS
851 CLQQLSLLMW ITQCFLPVFL AQPPSGQERA SATLQDLVFD ECGITDDQLL
901 ALLPSLSLGD PKKLLTQHFV QENYLEYRQV PGSDPACEAL EAQQEALGLV
951 CVQAATSSSS PLVLGTLEFY LAMPFATPME AELARRSLAQ DAPPLPVEEA
1001 PRGVRMAARL QGAAWRLEPE DGTALCFIFA AEQFSDEVEP ATPEEGEPAT
1051 QRQDPAAAQE GTMNYPLWSQ SYEDSSNQEE EGPSTFPDLE SNQEEEGPST
1101 FPDLESEFQA ALSRKVAELV HVDLFLKEGA CDELFSYLIE KVKRKKNVLR
1151 LTIRLTAADH RQLQLSISSC LQQLSLLMWI TAAMPLEQRS QHCKPEEGLE
1201 ARGEALGLVG ADADGPGGPG IPDGPGGNAG GPGEAGATGG RYEFLWGPRA
1251 LVETSYVKVL HHMVKISGGP HITNCRLSEG DVMHLSQSPS VSQLSVLSLS
1301 GNYLEYRQVP GSDPACYEFL WGPRALVETS YVIFSKASSS LQLVFGIELM
1351 EVDPIGHLYI FQALYVDSLF FLRGRLDQLL RHVMNPLETL SYIAQFTSQF
1401 LSLQCLQALY VDSLFFLRGR LGQHLHLETF KAVLDGLDVL LAQEVRPRRW
1451 KFIRLTAADH RQLQLSISSC LQQLSLLMWI TCCKKLKIFA MPMQDIKMIL
1501 KMVQLDSIED LGAPRGPHGG AASGLNGCCR CGARGPESRL LKKVADLVGF
1551 LLLKYRAREP VTKAEMLESV IYDGLLGDNQ IMPKTGFLII VLVMIAMEGG
1601 HSISALQSLL QHLIGLSNLT HVLYPVPLES YIAREGDCAP EEKIWEELSV
1651 LEVFEGREDS IDQLLRHVMN PLETLSITNC RLSEGDVMHL SRALAETSYV
1701 KVLEYVIKVS ARVRFFFPSL RSNLTHVLYP VPLESYEDIH GTLHLERLAY
1751 LAAMLMAQEA LAFLMAQGAM LAAQERRVPR AKNYKHCFPE IFGKASESLQ
1801 LVFGIDVKEA DTLVEVTLGE VPAAESPDPP QSPQGASSLP THARLRELLC
1851 ELGRPSMVWL SANPCPHCGD RVMLTDVSPE PLQALLERAS ATLQDLVFDE
1901 CEDEGASAGQ GPKPEADSQE QGHPQTGCEC EEMLGSVVGN WQYFFPVIFS
1951 KASSSLQLVF GAAMSWRGRS TYRPRPRRYV EPPEMIGPMR PYISMSVWTS
2001 PRRLVELAGQ SLLKDEALAI AYDGREHSAY GEPRKLLTQD LVQEKYLEYR
2051 QQCFLPVFLA QAPSGQRRAA VKVLHHMVKI SGGPHISYPP LHEWVLREGE
2101 QLHITMPFSS PMEAELVRRI LSRDAAPLPR PGVLLKEFTV SGNILTIRLT
2151 AADHRQLQLS KMILKMVQLD SIEDLEVTCT WKLPTLAKFS FLIIVLVMIA
2201 MEGGHAPEEE IWEELSVMEV EVTCTWKLPT LAKFSPYLGQ MINLRRLLLS

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      2251 EGLEARGEAL GLVGAQAPAT EEQEAASSSS ISYPPLHEWV LREGEEAAHI
      2301 HASSYISPEK EEQYIAQFTS QFLSLQCLGN AGGPGEAGAT GGRGPRGAGA
      2351 ARASGPGGGP RGAGAARASG PGGGAPRGPH GGAASGLNQG ASAFPTTINF
      2401 TRQRQPSEGS SSREEEGPLA RRSLAQDAPP LPVPGVLLKE FTVSGNILAA
      2451 FDGRHSQTLK AMVQAWPFTC LPLGVLMKIK VSARVRFFFP SLREAALREE
      2501 EEGVAAGITD DQLLALLPSL SHCSQLTTLS FYGNSIVKTP EEEMRSHYVA
      2551 QTGILWLLMN NCFLNLISSC LQQLSLLMWI TQCFLPVFLA QAPSGQYLIE
      2601 KVKRKKNVLR LCCKKLKIFA MPMQDIAREP VTKAEMLESV IKNYKHCFPE
      2651 IFGKASLVRR ILSRDAAPLP RPGAVLKDFT VSGNLLHCSQ LTTLSFYGNS
      2701 ISISALQSLL QHLIGLMVWL SANPCPHCGD RTFYDPEPIL CPCFMPAASW
      2751 SQKRSFVYVW KTWGEGLPSQ PIIHTCLLQA RLMKEESPVV SWRLEPEDGT
      2801 ALCFIFVYFF LPDHLSFGRP FHLNFCDFLA APYLGQMINL RRLLLSHIHA
      2851 SSYISPEKEE QQAPATEEQE AASSSSTLVE VTLGEVPAAE SQAWPFTCLP
      2901 LGVLMKGQHL HLETFKAVLD GLSTEAEQPF IPVEVLVDLF LKEGACDELF
      2951 SAEVPGAQGQ QGPRGREEAP RGVRMAARLQ GGAPRGPHGG AASAQDGRCP
      3001 CGARRPDSRL LGPRGAGAAR ASGPRGGAPR GPHGGAASAQ DLAGQSLLKD
      3051 EALAIAALEL LPRELFPPLF MEPATQRQDP AAAQEGEDEG ASAGQGPKPE
      3101 APEAAQPMTK KRKVDGLSTE AEQPFIPVEV LGRCPCGARR PDSRLLQLHI
      3151 TMPFSSPMEA EPGAVLKDFT VSGNLLFIRL TAADHRQLQL SEDIHGTLHL
      3201 ERLAYLHARL RELLCELGRP SDSQEQGHPQ TGCECEDGPD GQEMDPPNPE
      3251 EFVIGLRVWQ WEVISCKLIK RATTRQPAAD ADGPGGPGIP DGPGGNAGGP
      3301 GEAGATGGRP TGHSYVLVTC LGLSYDGLLG DNQIMPKTGF LLLKYRAREP
      3351 VTKAEMLGSV VGNWQYFFPT GILWLLMNNC FLNLSPRKPA AEFQAALSRK
                                                              =
      3401 VAELVHFLLL KYRAREPVTK AVPDSDPARY EFLWGPRALA ETSYVKVLEY
           ========
      3451 VGCCRCGARG PESRLLEFYL AMPFATPMEA EATCLGLSYD GLLGDNQIMP
      3501 KAGLLIIVLA IGNAGGPGEA GATGGRGPRG AGAARASGPR G
HITS AT:    3400-3408

REFERENCE   1:  136:49291

L38  ANSWER 8 OF 13  REGISTRY  COPYRIGHT 2004 ACS on STN
RN   235430-33-8  REGISTRY
CN   Amidase, acetylmuramoylalanine (Streptococcus pneumoniae C-terminal
     fragment) fusion protein with antigen MAGE A3 (human fragment) (9CI)
     (CA INDEX NAME)
CI   MAN
SQL  453

SEQ       1 MKGGIVHSDG SYPKDKFEKI NGTWYYFDSS GYMLADRWRK HTDGNWYWFD
         51 NSGEMATGWK KIADKWYYFN EEGAMKTGWV KYKDTWYYLD AKEGAMVSNA
        101 FIQSADGTGW YYLKPDGTLA DRPELASMLD MDLEQRSQHC KPEEGLEARG
        151 EALGLVGAQA PATEEQEAAS SSSTLVEVTL GEVPAAESPD PPQSPQGASS
        201 LPTTMNYPLW SQSYEDSSNQ EEEGPSTFPD LESEFQAALS RKVAELVHFL
                                                    =========
        251 LLKYRAREPV TKAEMLGSVV GNWQYFFPVI FSKASSSLQL VFGIELMEVD
        301 PIGHLYIFAT CLGLSYDGLL GDNQIMPKAG LLIIVLAIIA REGDCAPEEK
        351 IWEELSVLEV FEGREDSILG DPKKLLTQHF VQENYLEYRQ VPGSDPACYE
        401 FLWGPRALVE TSYVKVLHHM VKISGGPHIS YPPLHEWVLR EGEEGGHHHH
        451 HHH
HITS AT:    242-250

**RELATED SEQUENCES AVAILABLE WITH SEQLINK**

REFERENCE   1:  131:140508
```

L38 ANSWER 9 OF 13 REGISTRY COPYRIGHT 2004 ACS on STN
RN **235430-29-2** REGISTRY
CN Nonstructural protein NS1 (influenza virus fragment) fusion protein with antigen MAGE A3 (human fragment) (9CI) (CA INDEX NAME)
CI MAN
SQL 403

SEQ
1 MDPNTVSSFQ VDCFLWHVRK RVADQELGDA PFLDRLRRDQ KSLRGRGSTL
51 GLDIETATRA GKQIVERILK EESDEALKMT MDLEQRSQHC KPEEGLEARG
101 EALGLVGAQA PATEEQEAAS SSSTLVEVTL GEVPAAESPD PPQSPQGASS
151 LPTTMNYPLW SQSYEDSSNQ EEEGPSTFPD LESEFQAALS RKVAELVHFL
201 LLKYRAREPV TKAEMLGSVV GNWQYFFPVI FSKASSSLQL VFGIELMEVD
251 PIGHLYIFAT CLGLSYDGLL GDNQIMPKAG LLIIVLAIIA REGDCAPEEK
301 IWEELSVLEV FEGREDSILG DPKKLLTQHF VQENYLEYRQ VPGSDPACYE
351 FLWGPRALVE TSYVKVLHHM VKISGGPHIS YPPLHEWVLR EGEEGGHHHH
401 HHH

HITS AT: 192-200

RELATED SEQUENCES AVAILABLE WITH SEQLINK

REFERENCE 1: 131:140508

L38 ANSWER 10 OF 13 REGISTRY COPYRIGHT 2004 ACS on STN
RN **221306-20-3** REGISTRY
CN L-Alanine, L-arginyl-L-lysyl-L-valyl-L-alanyl-L-α-glutamyl-L-leucyl-L-valyl-L-histidyl-L-phenylalanyl-L-leucyl-L-leucyl-L-leucyl-L-lysyl-L-tyrosyl-L-arginyl- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 18: PN: WO0020581 SEQID: 3 unclaimed sequence
CN 1: PN: US6291430 SEQID: 3 claimed protein
CN 3: PN: US6716809 SEQID: 3 claimed sequence
CN 855: PN: WO02078524 SEQID: 1090 unclaimed
SQL 16

SEQ
1 RKVAELVHFL LLKYRA

HITS AT: 2-10

REFERENCE 1: 140:302331

REFERENCE 2: 137:274808

REFERENCE 3: 135:256119

REFERENCE 4: 132:278179

REFERENCE 5: 130:336617

REFERENCE 6: 130:233276

L38 ANSWER 11 OF 13 REGISTRY COPYRIGHT 2004 ACS on STN
RN **160213-40-1** REGISTRY
CN L-Leucine, L-lysyl-L-valyl-L-alanyl-L-α-glutamyl-L-leucyl-L-valyl-L-histidyl-L-phenylalanyl-L-leucyl- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:
CN L-Leucine, N-[N-[N-[N-[N-[N-[N-(N-L-lysyl-L-valyl)-L-alanyl]-L-α-glutamyl]-L-leucyl]-L-valyl]-L-histidyl]-L-phenylalanyl]-L-leucyl]-
OTHER NAMES:
CN 57: PN: WO0142267 TABLE: 27a claimed sequence
CN 867: PN: WO02078524 SEQID: 1102 unclaimed
SQL 10

SEQ 1 KVAELVHFLL
=========
HITS AT: 1-9

REFERENCE 1: 137:274808

REFERENCE 2: 135:45180

REFERENCE 3: 122:263516

L38 ANSWER 12 OF 13 REGISTRY COPYRIGHT 2004 ACS on STN
RN **154652-79-6** REGISTRY
CN L-Leucine, L-lysyl-L-valyl-L-alanyl-L-α-glutamyl-L-leucyl-L-valyl-L-histidyl-L-phenylalanyl- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN L-Leucine, N-[N-[N-[N-[N-[N-(N-L-lysyl-L-valyl)-L-alanyl]-L-α-glutamyl]-L-leucyl]-L-valyl]-L-histidyl]-L-phenylalanyl]-
OTHER NAMES:
CN 27: PN: WO0078806 SEQID: 27 unclaimed sequence
CN 2: PN: WO0136452 FIGURE: 1a unclaimed sequence
CN 339: PN: WO0052163 PAGE: 31 unclaimed sequence
CN 35: PN: US6210886 SEQID: 34 unclaimed sequence
CN 4: PN: US20030143672 SEQID: 4 unclaimed sequence
CN 4: PN: WO03087126 SEQID: 4 claimed sequence
CN 56: PN: WO0142267 TABLE: 27a claimed sequence
SQL 9

SEQ 1 KVAELVHFL
=========
HITS AT: 1-9

REFERENCE 1: 141:70232

REFERENCE 2: 139:336911

REFERENCE 3: 139:148459

REFERENCE 4: 137:274808

REFERENCE 5: 135:370371

REFERENCE 6: 135:45180

REFERENCE 7: 135:45176

REFERENCE 8: 135:4462

REFERENCE 9: 134:247940

REFERENCE 10: 134:70363

L38 ANSWER 13 OF 13 REGISTRY COPYRIGHT 2004 ACS on STN
RN **153727-13-0** REGISTRY
CN Antigen (human clone 4.12 gene MAGE-3 reduced) (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 13: PN: WO0153833 SEQID: 55 claimed protein
CN 227: PN: WO0190197 SEQID: 829 unclaimed protein
CN 2: PN: EP1126027 SEQID: 2 claimed protein
CN 2: PN: US6291430 SEQID: 2 unclaimed protein
CN 2: PN: WO0020581 SEQID: 2 unclaimed protein
CN 70: PN: WO0153833 SEQID: 55 claimed sequence
CN Antigen (human clone Qc3C7 gene MAGEA3)
CN Antigen MAGE-A2 (melanoma-associated antigen A2) (human)
CN Antigen MZ2-D (human clone 4.12 gene MAGE-3)
CN Cell death inhibitor MAGE-3 (human)
CI MAN
SQL 314

SEQ 1 MPLEQRSQHC KPEEGLEARG EALGLVGAQA PATEEQEAAS SSSTLVEVTL
51 GEVPAAESPD PPQSPQGASS LPTTMNYPLW SQSYEDSSNQ EEEGPSTFPD
101 LESEFQAALS RKVAELVHFL LLKYRAREPV TKAEMLGSVV GNWQYFFPVI
=========
151 FSKASSSLQL VFGIELMEVD PIGHLYIFAT CLGLSYDGLL GDNQIMPKAG
201 LLIIVLAIIA REGDCAPEEK IWEELSVLEV FEGREDSILG DPKKLLTQHF
251 VQENYLEYRQ VPGSDPACYE FLWGPRALVE TSYVKVLHHM VKISGGPHIS
301 YPPLHEWVLR EGEE
HITS AT: 112-120

RELATED SEQUENCES AVAILABLE WITH SEQLINK

REFERENCE 1: 136:49291

REFERENCE 2: 135:256119

REFERENCE 3: 135:191320

REFERENCE 4: 135:136413

REFERENCE 5: 133:306136

REFERENCE 6: 132:278179

REFERENCE 7: 130:233276

REFERENCE 8: 121:252678

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L39 0 S L34

FILE 'HOME' ENTERED AT 15:08:50 ON 23 JUL 2004